A SYSTEM AND METHOD FOR DISSEMINATING TOPOLOGY AND LINK-STATE INFORMATION TO ROUTING NODES IN A MOBILE AD HOC NETWORK

Abstract

Described is a link-state routing protocol used in a mobile ad hoc network or in an Internet for disseminating topology and link-state information throughout the network. Reverse-path forwarding is used to broadcast each update along the minimum-hop-path tree rooted at the source of the update. Each path tree has the source node as a root node, a parent node, and zero or more children nodes. Updates are received from the parent node in the path tree for the source node that originates the update. Each update includes information related to a link in the network. A determination is made whether to forward the update message to children nodes, if any, in the path tree maintained for the source node originating the update in response to information in the received update. This information itself can indicate whether the update is to be forwarded to other nodes.